IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (currently amended): A switch circuit formed on a semiconductor substrate, comprising:

a first terminal to which a signal of transmission object is inputted;

a second terminal from which a signal of transmission object is outputted;

a first transistor formed in a first semiconductor region in said semiconductor substrate, which has one of [[a]] source and [[a]] drain terminals connected to said first terminal and another thereof connected to said second terminal;

a control circuit ~~which controls~~ configured to control a gate voltage of said first transistor; and

a first rectifying element which has an anode terminal connected to said first terminal, a cathode terminal connected to a power supply terminal of said control circuit, said first rectifying element being formed in a second semiconductor region in said semiconductor substrate separate from said first semiconductor region.

Claim 2 (original): The switch circuit according to claim 1, wherein said first transistor is a p type.

Claim 3 (currently amended): The switch circuit according to claim 1, further comprising:

a [[third]] second rectifying element which has an anode terminal to which a power supply voltage is supplied, and a cathode terminal connected to the power supply terminal of

said control circuit, said [[third]] second rectifying element being formed [[on]] in a semiconductor region separate from said first semiconductor region.

Claim 4 (currently amended): The switch circuit according to claim 3, wherein ~~said third rectifying element is formed on~~ said second semiconductor region includes the semiconductor region in which said second rectifying element is formed.

Claim 5 (currently amended): The switch circuit according to claim 1, further comprising:

a second transistor of a conductive type different from that of said first transistor which has one of a source terminal and a drain terminal connected to said first terminal and another thereof connected to said second terminal, said second transistor turning on/off in sync with said first transistor.

Claim 6 (original): The switch circuit according to claim 5, wherein said second transistor is formed in a third semiconductor region separate from said first and second semiconductor regions.

Claim 7 (currently amended): The switch circuit according to claim 1, wherein said first and second terminals are bi-directional input/output terminals, and further comprising:

a ~~fourth~~ second rectifying element formed in said second semiconductor region, which has an anode terminal connected to said second terminal and a cathode terminal connected to [[a]] the power supply terminal of said control circuit.

Claim 8 (currently amended): The switch circuit according to claim 1, further comprising:

a [[fifth]] second rectifying element which has an anode terminal connected to [[a]] the source terminal of said first transistor, and a cathode terminal connected to a substrate of said first transistor; and

a [[sixth]] third rectifying element which has an anode terminal connected to [[a]] the drain terminal of said first transistor~~; and~~

~~a back gate of said second transistor which is grounded~~.

Claim 9 (original): The switch circuit according to claim 1, wherein said first rectifying element is formed of an MOS transistor which has a source or drain terminal shortcut to a gate terminal.

Claim 10 (currently amended): The switch circuit according to claim [[2]] 7, wherein said at least one of said first and second rectifying elements is formed of an MOS transistor which has a source or a drain terminal shortcut to a gate terminal.

Claim 11 (currently amended): The switch circuit according to claim [[3]] 5, wherein said control circuit includes:

a first logic circuit ~~which controls a~~ configured to control the gate voltage of said first transistor; and

a second logic circuit ~~which controls~~ configured to control a gate voltage of said second transistor by a signal inverting an output of said first logic circuit~~;~~

~~a cathode terminal of said third rectifying element being connected to a power supply terminal of said first logic circuit and a power supply terminal of said second logic circuit~~.

Claim 12 (currently amended): A switch circuit formed on a semiconductor substrate, comprising:

a first terminal to which a signal of transmission object is inputted;

a second terminal from which a signal of transmission object is outputted;

a p-type first transistor which has one of [[a]] source and [[a]] drain terminals connected to said first terminal and another thereof connected to said second terminal;

a control circuit ~~which controls~~ configured to control a gate voltage of said first transistor;

a first rectifying element formed in a first semiconductor region in said semiconductor substrate, which has an anode terminal to which a first power supply voltage is supplied and a cathode terminal connected to a back gate of said first transistor; and

a second rectifying element formed in a second semiconductor region in said semiconductor substrate separate from said first semiconductor region, which has an anode terminal connected to said first terminal and a cathode terminal connected to a power supply terminal of said control circuit.

Claim 13 (currently amended): The switch circuit according to claim 12, further comprising:

a third rectifying element formed in a semiconductor region separate from said first semiconductor region, which has an anode terminal to which [[the]] a second power supply voltage is supplied and a cathode terminal connected to [[a]] the power supply terminal of said control circuit.

Claim 14 (currently amended): The switch circuit according to claim 13, wherein ~~said third rectifying element is formed in~~ said second semiconductor region includes the semiconductor region in which said third rectifying element is formed.

Claim 15 (original): The switch circuit according to claim 12, further comprising a second transistor of a conductive type different from that of said first transistor, which has one of a source terminal and a drain terminal connected to said first terminal, and another thereof connected to said second terminal, said second transistor turning on/off in sync with said first transistor.

Claim 16 (original): The switch circuit according to claim 15, wherein said second transistor is formed in a third semiconductor region separate from said first and second semiconductor regions.

Claim 17 (currently amended): The switch circuit according to claim 12, wherein said first and second terminals are bi-directional input/output terminals, and further comprising:

a ~~fourth~~ third rectifying element formed in said second semiconductor region which has an anode terminal connected to said second terminal and a cathode terminal connected to [[a]] the power supply terminal of said control circuit.

Claim 18 (currently amended): The switch circuit according to claim 12, further comprising:

a [[fifth]] third rectifying element which has an anode terminal connected to the source terminal of said first transistor, and a cathode terminal connected to the ~~substrate~~ back gate of said first transistor; and

a [[sixth]] fourth rectifying element which has an anode terminal connected to the drain terminal of said first transistor, and a cathode terminal connected to the ~~substrate~~ back gate of said first transistor~~; and~~

~~a back-gate of said second transistor which is grounded~~.

Claim 19 (currently amended): The switch circuit according to claim [[13]] 15, wherein said control circuit includes:

a first logic circuit ~~which controls a~~ configured to control the gate voltage of said first transistor; and

a second logic circuit ~~which controls~~ configured to control a gate voltage of said second transistor by a signal inverting an output of said first logic circuit~~,~~

~~wherein a cathode terminal of said third rectifying element is connected to power supply terminals of said first and second logic circuits~~.

Claim 20 (currently amended): A switch circuit formed on a semiconductor substrate, comprising:

a first terminal to which a signal of transmission object is inputted;

a second terminal from which a signal of transmission object is outputted;

a first transistor formed in a first semiconductor region in said semiconductor substrate, which has one of [[an]] emitter and [[a]] collector terminals connected to said first terminal and another thereof connected to said second terminal;

a control circuit ~~which controls~~ configured to control a base voltage of said first transistor; and

a first rectifying element which has an anode terminal connected to said first terminal, a cathode terminal connected to a power supply terminal of said control circuit, said first

rectifying element being formed in a second semiconductor region in said semiconductor substrate separate from said first semiconductor region.

Claim 21 (currently amended): A switch circuit formed on a semiconductor substrate, comprising:

a first terminal to which a signal of transmission object is inputted;

a second terminal from which a signal of transmission object is outputted;

a p-type first transistor which has one of [[an]] emitter and [[a]] collector terminals connected to said first terminal and another thereof connected to said second terminal;

a control circuit ~~which controls~~ configured to control a base voltage of said first transistor;

a first rectifying element formed in a first semiconductor region in said semiconductor substrate, which has an anode terminal to which a power supply voltage is supplied and a cathode terminal connected to a back base of said first transistor; and

a second rectifying element formed in a second semiconductor region in said semiconductor substrate separate from said first semiconductor region, which has an anode terminal connected to said first terminal and a cathode terminal connected to a power supply terminal of said control circuit.